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**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF CALIFORNIA**

PACIFIC COAST FEDERATION OF
FISHERMEN’S ASSOCIATIONS, et al.,
Plaintiffs,

v.

GINA RAIMONDO, in her official
capacity as Secretary of Commerce, et
al.,
Defendants.

Case No. 1:20-cv-00426-DAD-EPG
Case No. 1:20-cv-00431-DAD-EPG

**JOINT RESPONSE TO JANUARY 18, 2022
ORDER [*PCFFA v. Raimondo*, ECF 361]**

THE CALIFORNIA NATURAL
RESOURCES AGENCY, et al.,
Plaintiffs,

v.

GINA RAIMONDO, et al.,
Defendants.

Operational areas in dispute¹	Federal Defendants' and State Plaintiffs' Proposed Operations for this Water Year ("State/Federal IOP")^{2,3}	PCFFA Plaintiffs' Proposed Operations⁴	Defendant-Intervenors' Characterization of Existing Protective Measures⁵
Delta Operations			

¹ Limitations on intended use of this table: This simplified summary table does not modify or waive any claim or defense raised by any party in the briefing in this case, and the parties agree that any text from this simplified table will not be used against any party in this proceeding. To the extent there is a conflict between this table and the briefing, the briefing controls. Defendant intervenors do not adopt certain characterizations in the Federal Defendants' and State Plaintiffs' and PCFFA Plaintiffs' columns in the chart, including of Incidental Take Permit No. 2081-2019-066-00 ("ITP") and the 2009 BiOp. Defendant Intervenor State Water Contractors disputes certain of the Federal Defendants' and State Plaintiffs' and PCFFA Plaintiffs' characterizations of the ITP and 2009 BiOp.

² The coordinated operations of the CVP and SWP not governed by Paragraphs 6 through 17 as set forth in the State/Federal IOP through water year 2022 will continue to be governed by the 2019 Biological Opinions, 2020 ROD, the California Department of Water Resources (DWR) 2020 ITP for DWR's operations of the SWP (DWR's ITP), and any other applicable legal requirements.

³ The State/Federal IOP would run from the date of a Court order approving the plan through September 30, 2022 (PO ¶ 3).

⁴ PCFFA's proposal also narrows the incidental take statement in the 2019 BiOps to only authorize take that is incidental to CVP/SWP coordinated operations that are consistent with the operational requirements of the injunction (which govern if 2022 is a Critically Dry and Dry year).

⁵ The Existing Operations column describes only those existing measures under current operations that correspond to the operational areas of dispute enumerated by the other parties. Defendant Intervenor did not add any other matters in dispute that are addressed elsewhere in the pleadings. Additionally, the Existing Operations column does not identify other protective operational and non-operational restrictions/actions analyzed in the 2019 BiOps or 2020 ROD, or all relevant provisions of the ITS. Federal Defendants, PCFFA Plaintiffs, and California Plaintiffs do not adopt Defendant Intervenor's characterization of the 2020 ROD, or 2019 BiOps and ITS and reserve their right to object to Defendant Intervenor's characterization of those documents.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Old and Middle Rivers (OMR) Flexibility During Delta Excess Conditions – Storm Flex - All Water Year Types	Proposed Order (“PO”) ¶¶ 6, 7; State ITP 8.7 ⁶ : Reclamation and California Department of Water Resources (“DWR”) may operate to a maximum -6,250 cfs on a 5-day average March – June to capture peak flows during storm events. Before this provision can be implemented, requires that Delta is in excess conditions, QWEST is positive, none of specified Conditions of Approval of ITP are controlling, and other limitations, and specifies conditions requiring a return to -5,000 OMR or more positive. Requires a risk assessment by smelt and salmon monitoring teams to evaluate potential impacts to fish. Requires California Department of Fish and Wildlife (“CDFW”) approval. During the March – June period any storm flexibility will be operated consistent with the	Dkt. 321-1 at 2-3 ⁷ : Requires compliance with 2009 NMFS BiOp RPA Action IV.2.3 (at 648-51), including the requirement that OMR reverse flows must be maintained within a range of -1,250 to -5,000 cfs (on a 14-day running average) from January to June 15. This prohibits unrestricted pumping that is more negative than -5,000 cfs during storm or precipitation events.	Projects may operate to a flow more negative than -5,000 cfs to capture peak flows during storm-related events. Storm-related increases in exports are not allowed if: <ul style="list-style-type: none"> • First Flush or any other OMR actions are triggered; • Conditions indicate that more negative OMR flows would likely trigger a real-time restriction; • Salvage of yearling late-fall run as yearling spring-run Chinook salmon surrogates exceeds 0.5% of any release group; • Changes in spawning, rearing, foraging, sheltering, or migration behavior beyond those anticipated to occur under OMR management.
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⁶ This chart summarizes certain conditions of approval of the ITP, issued to DWR, which the State/Federal IOP incorporates. This summary chart paraphrases ITP conditions and eliminates detail; however, the conditions as they are written in the ITP are controlling. DWR is already subject to the conditions of approval for the entire ITP. For water year 2022, Reclamation has agreed to adopt specific conditions of the ITP identified in the State/Federal IOP. In some instances, Defendant Intervenor State Water Contractors disputes the characterization of the conditions of the ITP set forth by Federal Defendants and State.

⁷ Citations are to ECF pagination.

	<p>Incidental Take Statement in the 2019 FWS Biological Opinion requiring OMR flows be no more negative than -5000 cfs on a 14-day moving average. DWR will provide NMFS and FWS an analysis of how the action provides similar or better protection as compared to the 2019 Biological Opinions and how the action will help replenish storage South of Delta.</p> <p>DWR will only implement OMR flexibility with the approval of the Regional Director of FWS and Regional Administrator of NMFS.</p>		<p>(Final BA at p. 4-71.)</p> <p>Under existing operations, Reclamation's operation of the CVP and DWR's operation of the SWP are subject to the Incidental Take Statement in the 2019 FWS Biological Opinion requiring OMR flows be no more negative than -5,000 cfs on a 14-day moving average in March-June or at the flow determined through use of Service-approved life cycle models to limit recruitment to stable levels. (2019 FWS BiOp at 395.)</p>
Delta Restrictions – Spring Outflow (I:E Ratio) if Critical, Dry, or Below Normal Water Year Type	<p>PO ¶ 11: Reclamation shall reduce exports in the event Water Year 2022 is classified, based on the San Joaquin Valley 60-20-20 index, as critical, dry, or below normal to ensure a volumetric reduction consistent with DWR's implementation of State ITP 8.17. Reclamation takes this action to reduce the vulnerability of CV steelhead outmigrating through the San Joaquin River to entrainment into channels in the south Delta and to entrainment at the pumps as</p>	<p>Dkt. 321-1 at 2: Requires compliance with 2009 NMFS BiOp RPA Action IV.2.1 (at 642-44): in a Critically Dry year, the ratio of San Joaquin River inflow to CVP/SWP combined exports will be 1:1 on a 14-day average; in a Dry year, the ratio will be 2:1.</p>	<p>Inflow to Export ratio replaced by additional real-time OMR restrictions and performance objectives, including single-year and cumulative loss thresholds, protect species from entrainment. (2019 NMFS BiOp 777.)</p> <p><i>See also</i> steelhead loss thresholds in row titled "Winter-run Single-year Loss Threshold in All Water Year Types," <i>infra</i>.</p>

	<p>a result of the hydraulic effects of pumping operations.</p> <p>ITP 8.17: Reduce exports April 1 through May 31 to achieve a ratio of Vernalis flows to CVP and SWP combined exports of:</p> <ul style="list-style-type: none"> • Critically Dry: 1:1 • Dry: 2:1 • Below Normal 3:1 <p>I:E Ratio: The following is reproduced from its original source in NMFS' 2009 BO and has ratios that are calculated on a 14 day running average of measured inflow and exports and based on available hydrology in a given year:</p> <p>"Reclamation and DWR shall implement the Vernalis flow-to-combined export ratios in the following table, based on a 14-day running average.</p> <ul style="list-style-type: none"> • Critically Dry year: 1:1 • Dry year: 2:1 • Below Normal: 3:1 		<p>D-1641 further limits exports as follows:</p> <ul style="list-style-type: none"> • 31-day period between April 1 and May 30: Maximum export rate of 1,500 cfs or 100% of 3-day running average of San Joaquin River flow at Vernalis, whichever is greater. <p>Under existing operations, the SWP is subject to ITP 8.17 in the ITP. It is Defendant-Intervenor State Water Contractor's understanding that ITP 8.17 is different than the State and Federal Defendants' proposed operation for the CVP.</p>
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<p>Delta Restrictions – Summer-Fall Action Plan</p>	<p>PO ¶ 10: In coordination with DWR and consistent with DWR’s implementation of State ITP 9.1.3.1, Reclamation will share the water costs for DWR to operate the Suisun Marsh Salinity Control Gates (“SMSCG”) in below normal years for a maximum of 60 days to maximize the number of days that Belden’s Landing three-day average salinity is equal to or less than 4 ppt salinity (to create habitat for delta smelt).</p> <p>ITP 9.1.3.1 establishes criteria to be met for implementation of Summer-Fall Action Plan by water year type. In a Below Normal water year, it requires DWR to operate the SMSCG for 60 days.</p>		<p>From June through October of below normal, above normal, and wet years, Reclamation will maintain low salinity habitat in Suisun Marsh and Grizzly Bay (e.g. 0-6 ppt at Belden’s Landing), manage the low salinity zone overlap with turbid water and available food supplies, and establish contiguous low salinity habitat from Cache Slough Complex to the Suisun Marsh. Reclamation and DWR will implement additional measures to benefit delta smelt, including:</p> <ul style="list-style-type: none"> • Suisun Marsh Salinity Control Gate operations for up to 60 additional days (not necessarily consecutive) from June 1 through October 31 of Below Normal and Above Normal years. This action may also be implemented in Wet years if preliminary analysis shows expected benefits; • Food enhancement actions.
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			<p>Reclamation shall form a Delta Coordination Group with representatives from Reclamation, DWR, FWS, NMFS, CDFW, and representatives from federal and state water contractors) to analyze the proposed Summer-Fall Habitat Action. Through the Delta Coordination Group, Reclamation shall develop a multi-year science and monitoring plan.</p> <p>(2019 FWS BiOp 51-54; Final BA 4-72 to 4-74.)</p> <p>Under existing operations, the SWP is subject to ITP 9.1.3.</p>
Delta OMR Restrictions – Adult Delta Smelt		Dkt. 321-1 at 3: The proposed injunction requires daily OMR flows to be zero or positive for 7 consecutive days following the salvage of one or more adult Delta Smelt by the CVP or SWP.	<p>From the onset of OMR to the end, operate to an OMR of no more negative than - 5,000 cfs on a 14-day moving average unless other OMR actions are triggered, as outlined below. (Final BA, p. 4-67.)</p> <p><u>Onset of OMR Management</u></p>

OMR management will start when one or more of the following conditions have occurred: 1.) Integrated Early Winter Pulse Protection (First Flush) triggered; 2.) Salmon presence. After January 1, if more than 5% of any one or more salmon species are estimated to be present in the Delta. At the time of this writing, the first flush has occurred and OMR management is in effect. (Final BA, p. 4-67.)

Turbidity Bridge Avoidance (Delta Smelt):
From approximately February 1 to April 1, operate to an average turbidity less than 12 NTU at Bacon Island. If turbidity exceeds 12 NTU, OMR flows no more negative than -2,000 cfs until turbidity average drops below 12 NTU. If reduced OMR flows do not reduce turbidity after 5 days, Reclamation and DWR may determine managing turbidity is

			<p>infeasible and operate to an OMR target deemed protective but no more negative than -5,000 cfs. (Final BA, pp. 4-67 to 4-68.)</p> <p><i>See also</i> loss thresholds for all species in row titled “Winter-run Single-year Loss Threshold in All Water Year Types,” <i>infra</i>.</p>
Delta OMR Restrictions – Larval and Juvenile Delta Smelt Protection in All Water Year Types	PO ¶ 6; State ITP 8.5.2: DWR and Reclamation will restrict exports to protect larval and juvenile delta smelt based on risk assessments and when salvage triggers are reached. Restricts exports to maintain a 7-day average OMR index no more negative than -5,000 or -3,500 depending on certain salvage criteria for juvenile delta smelt. Subsequent risk assessments prepared by Smelt Monitoring Team may provide advice for further restrictions to an OMR index between -1,250 and -5,000.	Except as modified herein, Plaintiffs’ proposed injunction requires implementation of the 2019 FWS BiOp.	<p>Starting March 15th, operationalize the life cycle model results, through the use of real-time monitoring for the spatial distribution of Delta Smelt and QWEST flow calculation to select protective OMR. (Final BA, p. 4-68.)</p> <p>Under existing operations, the SWP is subject to ITP 8.5.2 as written in the ITP.</p>

Delta OMR Restrictions – End of OMR Management in All Water Year Types	<p>PO ¶ 6; State ITP 8.8: OMR restrictions continue through June 30, or until the following species-specific off-ramps occur:</p> <p>1) Delta smelt: Daily mean water temperature at Clifton Court Forebay is greater than 25°C for three consecutive days.</p> <p>2) Winter-run Chinook salmon (“CHNWR”) and spring-run Chinook salmon (“CHNSR”):</p> <ul style="list-style-type: none"> • More than 95% of CHNWR and CHNSR have migrated past Chipps Island as determined by the Salmon Monitoring Team; AND • Daily average water temperature at Mossdale exceeds 22.2°C (72°F) for 7 nonconsecutive days in June; AND • Daily average water temperature at Prisoner's Point exceeds 22.2°C for 7 nonconsecutive days in June. 	<p>Dkt. 321-1 at 2-3:</p> <p>Requires compliance with 2009 NMFS BiOp RPA Action IV.2.3 (at 648-51), which provides that OMR restrictions apply until June 15 or until average daily water temperature at Mossdale is greater than 72°F (22°C) for 7 consecutive days (1 week), whichever is earlier.</p>	<p>OMR criteria may control operations until June 30 for delta smelt and Chinook salmon, until June 15 for steelhead, or when species-specific off ramps occur:</p> <ul style="list-style-type: none"> • Delta smelt: Daily mean water temperatures at Clifton Court Forebay reaches 25°C for 3 consecutive days. • Salmonids: More than 95% of salmonids have migrated past Chipps Island or after daily average water temperatures at Mossdale exceed 72°F for 7 days during June. <p>(Final BA 4-66 to 4-72)</p> <p>Under existing operations, the SWP is subject to ITP 8.8 as written in the ITP.</p>
Winter-run Single-year Loss Threshold in All Water Year Types	<p>PO ¶ 6; State ITP 8.6.1: Provides for operations to avoid exceeding the following single-year loss thresholds at the CVP and SWP salvage facilities:</p> <ul style="list-style-type: none"> • Natural CHNWR – 1.17% of the juvenile production estimate (“JPE”) 		<p><u>Single-Year Loss Thresholds:</u></p> <p>OMR flows will be managed to avoid exceeding single-year loss thresholds:</p> <p>Natural WR loss = 1.17% of JPE</p>

1	• Hatchery CHNWR – 0.12% of JPE		Hatchery WR loss = 0.12% of JPE
2			Natural Steelhead (Dec.- Mar.) = 1,414
3	Requires more positive OMR if 50% (-3,500) or 75% (-2,500) if annual thresholds are exceeded, through end of OMR management, or if after 14 days of operations at the more positive OMR, a risk assessment of the Salmon Monitoring Team determines risk to CHNWR is no longer present.		Natural Steelhead (April-June) = 1,552
4			• If Projects exceed 50% of that threshold, together they will operate OMR to a 14-day average of no more negative than - 3,500cfs for the rest of the season, unless it is determined that further OMR restrictions are not required because risk assessment shows entrainment risk no longer present.
5			• If Projects exceed 75% of that threshold, together they will operate OMR to a 14-day average of no more negative than - 2,500cfs for the rest of the season, unless it is determined that further OMR restrictions are not required because risk assessment shows entrainment risk no longer present.
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- If Projects exceed the threshold, they will immediately seek technical assistance from NMFS and FWS for the remainder of the management period. And prior to the next season, they will charter an independent peer review panel to review operations.

(Final BA, pp. 4-69 to 4-70.)

Cumulative Loss Thresholds:
OMR flows will be managed to avoid exceeding cumulative loss thresholds (based on historical loss from 2010 through 2018) for winter-run Chinook salmon, hatchery winter-run Chinook salmon, CV steelhead:

Natural WR=8,738
Hatchery WR=5,356
Natural steelhead (Dec.-Mar.) = 5,356
Natural steelhead (April-June) = 5,826

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| | | | <ul style="list-style-type: none">• If Projects exceed 50% of cumulative loss threshold prior to 2024, independent panel will be convened to review actions contributing to loss trajectory and make recommendations on modifications or additional protective actions.• An independent review panel will be convened in 2024 to review the first five years of operations and determine whether actions will reliably limit losses to below threshold.• If Projects exceed cumulative loss threshold, they will immediately seek technical assistances from FWS and NMFS for remainder of OMR management period. And prior to next management season, they will charter an independent panel to review and evaluate the OMR actions. |
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(Final BA, pp. 4-68 to 4-69.)

			<p>The anticipated level of Natural WR in the salvage sample that, once reached, requires operational changes at the pumping facilities is: 1.3% of JPE on a three-year rolling average or 2.0% of the JPE in any single year. (2019 NMFS BiOp at 809-810.)</p> <p>Under existing operations, the SWP is subject to ITP 8.6.1 as written in the ITP.</p>
Early-season Natural Winter-run Chinook Salmon Discrete Daily Loss Threshold	<p>PO ¶ 6; State ITP 8.6.2: Requires operational restrictions based on loss at SWP and CVP salvage facilities of older juvenile salmon in November and December.</p> <p>No longer applicable in Water Year 2022.</p>		<p>See single-year and cumulative loss thresholds in row titled “Winter-run Single-year Loss Threshold in All Water Year Types,” <i>supra</i>.</p>
Delta OMR Restrictions – Mid- and Late-season Natural Winter-run Chinook Salmon Daily Loss Threshold in All Water Year Types	<p>PO ¶ 6; State ITP 8.6.3: Threshold is based on a fraction of the annual CHNWR JPE from January through the end of CHNWR emigration in May. The monthly fraction of the JPE that would require an OMR adjustment is 0.00635% in January, 0.00991% in February, 0.0146% in March, 0.00507% in April and 0.0077% in</p>	<p>Dkt. 321-1 at 2-3: Requires compliance with 2009 NMFS BiOp RPA Action IV.2.3 (at 648-51), including salvage limits:</p> <p>From Jan. 1 to June 15, requires more positive OMR (-3,500 cfs) for a minimum of 5 days if daily SWP/CVP older juvenile loss</p>	<p>See single-year and cumulative loss thresholds in row titled “Winter-run Single-year Loss Threshold in All Water Year Types,” <i>supra</i>.</p>

	May. When a daily loss of natural older juveniles at the SWP and CVP salvage facilities is exceeded, exports are reduced to achieve a daily OMR flow of -3,500 cfs for five consecutive days.	density is greater than 2 percent of the JPE divided by 2000 (minimum value of 2.5 fish per thousand acre feet). Resumption of (minus) -5,000 cfs flows is allowed when average daily fish density is less than trigger density for 3 consecutive days following the 5 consecutive days of export reduction.	
Delta OMR Restrictions – Daily Spring-run Chinook Salmon Hatchery Surrogate Loss Threshold in All Water Year Types	PO ¶ 6; State ITP 8.6.4: Provides between February 1 and June 30 reduced south Delta exports for five consecutive days to achieve a 5-day average OMR index no more negative than -3,500 cfs when: • Feather River Hatchery coded wire tagged (“CWT”) CHNSR surrogates (includes both spring- and fall-run hatchery release groups) cumulative loss at the at the CVP and SWP salvage facilities is greater than 0.25% for each release group; or • Coleman National Fish Hatchery and Nimbus Fish Hatchery CWT fall-run release groups cumulative loss at the at the CVP and SWP salvage facilities is greater than 0.25% of the total in-river releases for each release group.	Dkt. 321-1 at 2-3: Requires compliance with 2009 NMFS BiOp RPA Action IV.2.3 (at 648-51), including salvage limits: From Jan. 1 to June 15, requires more positive OMR (-3,500 cfs) for a minimum of 5 days if cumulative loss of late fall run surrogate releases is greater than 0.5%. Resumption of (minus) -5,000 cfs flows is allowed when average daily fish density is less than trigger density for 3 consecutive days following the 5 consecutive days of export reduction.	Spring-run Chinook entrainment loss is managed through loss thresholds for other species (2019 NMFS BiOp at 507), discussed above in row titled “Winter-run Single-year Loss Threshold in All Water Year Types,” <i>supra</i> . Spring-run Chinook entrainment is limited by a maximum incidental take level, which uses late fall-run as a surrogate for spring-run Chinook yearlings. The incidental take level for spring-run Chinook yearlings that, once reached, requires operational changes, is 1% of the estimated number of late fall-run Chinook salmon

			released from Coleman National Fish Hatchery in each surrogate release group released into Battle Creek. (2019 NMFS BiOp at 809-810). Under existing operations, the SWP is subject to ITP 8.6.4 as written in the ITP.
Steelhead Salvage Loss Threshold		<p>Dkt. 321-1 at 2-3: Requires compliance with 2009 NMFS BiOp RPA Action IV.2.3 (at 648-51), including salvage limits:</p> <p>From Jan. 1 to June 15, requires more positive OMR (-3,500 cfs) for a minimum of 5 days if daily loss of wild steelhead at SWP/CVP is greater than daily measured fish density divided by 12,000 acre feet.</p> <p>Resumption of (minus) -5,000 cfs flows is allowed when average daily fish density is less than trigger density for 3 consecutive days following the 5 consecutive days of export reduction.</p>	See steelhead loss thresholds in row titled “Winter-run Single-year Loss Threshold in All Water Year Types,” <i>supra</i> .

Shasta Operations			
Shasta Releases if Critical or Dry Water Year Type	<p>PO ¶¶ 12, 17: Commencing February 2022, if the Court adopts the State/Federal IOP, Reclamation will operate Shasta to meet the following priorities in the order described below:</p> <p>a. Public Health and Safety: Defined as meeting Municipal and Industrial Delta salinity requirements and minimum Municipal and Industrial deliveries for Public Health and Safety.</p> <p>b. Habitat Criteria: Winter Run Chinook Salmon habitat criteria. Reclamation will not schedule nor make deliveries of stored water from Shasta for any reason other than Public Health and Safety until Reclamation receives approval of a temperature management plan from NMFS that shows Reclamation will meet winter run Chinook salmon habitat criteria and end of September carryover storage per PO ¶ 16(i).</p> <p>c. Senior contractor and Central Valley Project Improvement Act</p>		<p><u>Drought Toolkit:</u> Reclamation shall coordinate with NMFS, FWS, CDFW, and DWR in developing a toolkit to address drought (lower tier 3 years and Tier 4 years).</p> <p>In Tier 3 and Tier 4 years, Reclamation shall meet and confer with USFWS, NMFS, DWR, CDFW, and SRS Contractors on voluntary measures to be considered if drought conditions continue, including measures that may be beyond Reclamation's and DWR's discretion.</p> <p>In accordance with their approved resolution, the SRS Contractors will meet and confer with these agencies to determine if there is any role for the SRS Contractors in connection with Reclamation's operational decision-making for Shasta Reservoir annual operations in those years. This determination will include</p>

	<p>(“CVPIA”) level 2 refuge deliveries, after ensuring any such deliveries are consistent with PO 12(i)(b) (habitat criteria) and 16(i) (carryover storage).</p> <p>d. Other deliveries, after ensuring any such deliveries are consistent with PO 12(i)(b) (habitat criteria), 12(i)(c) (Senior Contractor and CVPIA level 2 refuge deliveries) and 16(i) (carryover storage).</p>		<p>consideration of what actions are feasible, consistent with the terms of the SRS Contracts. In addition to the 25% reduction during Shasta Critical Years as set forth in the SRS Contracts, the types of actions that may be considered include, but are not necessarily limited to: (1) the scheduling of spring diversions by the SRS Contractors; (2) voluntary, compensated water transfers by the SRS Contractors subject to Reclamation approval; and (3) delayed SRS Contractor diversion for rice straw decomposition during the fall months.</p> <p>(Final BA 4-89 to 4-90; 2019 NMFS BiOp at 8, 55, 258.)</p>
<p>Sacramento River Temperature Management if Critical, Dry, or Below Normal</p>	<p>PO ¶¶ 12, 13, 15, 17: Winter Run Chinook Salmon Habitat: Reclamation will meet the following daily average temperatures at the Clear Creek</p>	<p>Dkt. 321-1 at 3-5: Requires Reclamation not to exceed a maximum daily average water temperature of 54.5°F at the Clear Creek gauge from the date that initiation of spawning of</p>	<p>Between May 15 and October 31,⁸ Reclamation will use a 4-tiered strategy depending on the volume of the cold water pool on May 1, with temperature targets of</p>

⁸ “[I]mplementation of temperature management would start after May 15, or when the monitoring working group determines, based on real-time information, that winter-run Chinook salmon have spawned, whichever is later.” 2019 NMFS BiOp 236.

<p>Water Year Type</p>	<p>Gauge from May 15 to October 31 by year type</p> <p>a. 55°F in Critical Year</p> <p>b. 54°F in Dry and Below Normal Year</p> <p>A Shasta Planning Group shall be established by the federal and state agencies comprised of the 6 agencies (i.e., NMFS, FWS, Reclamation, CDFW, DWR, and State Water Resources Control Board (“SWRCB”)) that will work iteratively with the technical groups to solicit operational guidance and risk assessments and provide policy guidance as necessary. Technical input via the Sacramento River Temperature Task Group.</p> <p>If Reclamation is unable to meet habitat criteria for the entire period, then the agencies will agree on an operation to provide</p>	<p>winter-run Chinook salmon is observed or May 15, whichever is earlier, until October 31, 2022, assuming 2022 is classified as a Critically Dry year; in a Dry year, the temperature requirement is 53.5°F.</p> <p>Requires Reclamation not to exceed a maximum daily average water temperature of 61°F at Jelly’s Ferry gauge from March 1 to the date that initiation of spawning of winter-run Chinook salmon is observed or May 15, whichever is earlier (Critically Dry and Dry years).</p> <p>Requires that the Parties meet and confer if 2022 is classified as a water year type other than Dry or Critically Dry.</p>	<p>the following daily average temperatures at the Clear Creek gauge:</p> <ul style="list-style-type: none"> • Tier 1:⁹ 53.5°F or lower; • Tier 2: 53.5°F during most critical period for winter-run egg incubation, up to 56°F for remainder of temperature management season; • Tier 3: between 53.5°F and 56°F during critical egg incubation period, not to exceed daily average of 56°F during the remainder of temperature management season; and • Tier 4: Reclamation will operate to a temp. target that is determined in real time with assistance from NMFS and FWS and will explore improved coordination of downstream diversions,
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⁹ The criteria for the tiers is as follows: Tier 1: May 1 more than 2.8 million acre-feet of cold water pool in Shasta Reservoir or modeling suggests that a daily average temperature of 53.5°F at Clear Creek gauging station can be maintained from May 15 to October 31; Tier 2: May 1 cold water pool volume between 2.3 and 2.8 MAF or modeling suggests that the 53.5°F at Clear Creek gauging station cannot be maintained from May 15 to October 31 but can be maintained for shorter periods with other periods at or below 56°F; Tier 3: May 1 cold water pool less than 2.3 MAF or modeling suggests that 53.5°F at Clear Creek gauging station cannot be maintained from May 15 to October 31 but a temperature between 53.5°F and 56°F can be maintained for shorter periods with other periods at or below 56°F; Tier 4: May 1 total storage less than 2.5 MAF or modeling suggests that 56°F at Clear Creek gauging station cannot be maintained from May 15 to October 31. (2019 NMFS BiOp at 234.)

	<p>sufficient habitat for the longest period possible. In such a situation, the agencies will also coordinate with the “Meet and Confer Group” described in the 2019 NMFS Biological Opinion and brief PCFFA plaintiffs and Defendant-Intervenors.</p> <p>Temperature management plan requires NMFS approval consistent with the decision process as set forth in paragraph 17 of the State/Federal IOP.</p>		<p>the potential for demand shifting, and other intervention methods.</p> <p>(2019 NMFS BiOp 54, 234, 241-242; Final BA 4-31 to 4-32.)</p>
Shasta Reservoir Maximum Temperature Dependent Mortality		Dkt. 321-1 at 3: Maximum temperature-dependent mortality of 30% of winter-run Chinook salmon in a Critically Dry year.	Reclamation will assess the effectiveness of Shasta temperature control using Upper Sacramento Performance Metrics for modeled temperature dependent mortality (TDM) and egg to fry (ETF) survival to ensure the plan performs at least as well as anticipated. If TDM or ETF survival fall outside the anticipated range in any year, Reclamation will confer with NMFS to determine if an independent panel is necessary. (2019 NMFS

			BiOp 257-258; Final BA 4-36 to 4-38.)
Shasta Reservoir Carryover Storage in Critical, Dry, or Below Normal Water Year Type	<p>PO ¶¶ 16, 17: End of September Shasta Storage for September 2022 in critical, dry, or below normal water years:</p> <p>Reclamation will determine final carryover storage volume planning goals by May 1, 2022, subject to water year 2022 hydrologic conditions, which may be amended by May 20, 2022 hydrology, and consistent with the decision process as set forth in paragraph 17 of the State/Federal IOP.</p> <p>Includes potential carryover storage range volumes based on preliminary modeling:</p> <ol style="list-style-type: none"> 1.2 million af to 1.8 million af in Critical year 1.8 million af to 2.5 million af in Dry year 2.5 million af to 3.2 million af in Below Normal year 	<p>Dkt. 321-1 at 3, 4-5: End of April storage requirement of 3.5 MAF (in Critically Dry and Dry years).</p> <p>End of September storage requirements are 1.9 MAF (Critically Dry year) or 2.2 MAF (Dry year).</p> <p>Reclamation may seek leave of the Court to modify these terms if, despite curtailment of water deliveries to contractors, it is unable to meet the requirements regarding Shasta water storage, temperature, and maximum temperature dependent mortality.</p> <p>Requires that the Parties meet and confer if 2022 is classified as a water year type other than Dry or Critically Dry.</p>	<p>“While Reclamation does not operate to specific end of water year storage targets in its reservoirs, carryover is a key consideration when making operational decisions. Many conditions are considered which factor into end of water year carryover storage in its facilities. These considerations include (but are not limited to): the previous years’ hydrology, previous years’ end of water year south of Delta storage, current water year hydrology and current south-of-Delta storage, as well as looking at next years’ potential hydrology and impacts resulting from various end-of-water year storage conditions. These factors are all considered when developing operations</p>

outlooks and actual real time operational decisions.”
(Final BA, p. 4-16.)

“If releases are reduced during some timeframes to maintain higher storage levels in reservoirs, that has a corresponding effect of reducing inflows to the Delta, which then reduces Delta outflows. The benefit of increased reservoir storage should be weighed against the potential negative downstream impacts on fisheries. In addition, maintaining a higher carryover storage increases the risk of having to make flood control releases early in the season to draw down to the required maximum flood conservation space. Making flood control releases in October and November to draw down to the required maximum storage conflicts with needs to avoid redd dewatering.”
(Final BA, p. 4-6.)

			Existing operations include “several operational components, that are intended to contribute to increased spring Shasta storage levels as compared to recent years. These include (1) Fall and Winter Refill and Redd Maintenance, which sets minimum late fall and winter flows, including modification of rice decomposition operations; (2) modified fall outflow requirements; (3) flexibility in export operations (especially in April and May); and (4) December 2018 changes to COA. These operations, as well as real-time operations, are expected to result in increased end of September carryover storage, which Reclamation expects to benefit the following May 1 storage in years without flood control releases.” (2019 NMFS BiOp at 54.)
Management Provisions			

Water Operations Management Team (WOMT) Process and Collaborative Approach to Real-Time Risk Assessment in All Water Year Types	<p>PO ¶¶ 8, 9; State ITP 8.1.4: Convenes weekly meetings of Water Operations Management Team (“WOMT”)) and the Smelt and Salmon Monitoring Teams, and institutes a decision-making protocol based on Smelt and Salmon Monitoring Team advice.</p> <p>The SWRCB will be a member of WOMT, and the SWRCB Executive Director will be included in Director level discussions.</p> <p>The Smelt and Salmon Monitoring Teams shall communicate their advice to WOMT, who will deliberate. If WOMT cannot reach consensus on an operational issue, the issue will be elevated to the Directors. If Directors reach resolution, Reclamation shall operate consistent with the decision. If resolution is not reached, either the Regional Director of FWS or Regional Administrator of NMFS, will make an operational decision for protection of listed species after conferring with the Director of the CDFW. Reclamation will</p>		<p>Reclamation will implement certain actions through collaborative planning with the goal of continuing to identify and undertake actions that benefit listed species. “Collaborative planning will make use of the Collaborative Science and Adaptive Management Program, Central Valley Project Improvement Act, Interagency Ecological Program, and Delta Plan Interagency Implementation Committee, successors to the forums, or complementary forums, e.g. Voluntary Agreement forums.” (Final BA, pp. 4-86; 2019 NMFS BiOp 56, 62.)</p> <p><i>See also</i> Final BA, pp. 4-21 to 4-24 (identifying operations components that are implemented through “Collaborative Planning” among agencies and water users).</p> <p>Under existing operations, the SWP is subject to ITP 8.1.4 as written in the ITP.</p>
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	implement the operational decision.		
Shasta Planning Group and Decision Process for Shasta Operations	<p>PO ¶ 13, 17: Convenes a six agency Shasta Planning Group (Reclamation, DWR, FWS, NMFS, CDFW, and SWRCB). The group meets monthly starting November 2021, and biweekly or more beginning January 2022.</p> <p>Beginning February 1, 2022, Reclamation will confirm with the Shasta Planning Group on a weekly basis that the multiple priorities identified in PO ¶ 12 can be satisfied in the order described based on latest forecast and hydrology, and will adjust releases accordingly.¹⁰</p> <p>Shasta Planning Group will also coordinate with the Meet and Confer Group of Sacramento River Settlement Contractors, Reclamation, and NMFS.</p>		<p>Beginning February 1, Reclamation prepares forecasts of water year runoff using precipitation to date, snow water content accumulations, and runoff to date. Reclamation updates runoff forecasts at least monthly between February and May. If projected May 1 storage is less than 2.5 MAF, Reclamation initiates discussions on intervention measures for a Tier 4 year.</p> <p>Reclamation performs the first temperature model run in April after the DWR Bulletin 120 has been received and the operations forecast completed. The April temperature model scenario is used to develop</p>

¹⁰ Reclamation may make releases year round to meet Public Health & Safety, and may make other releases for deliveries as early as April 1, 2022 provided they are consistent with the IOP.

If Shasta Planning Group cannot reach consensus on an operational issue, the issue will be elevated to the Directors. If the Directors do not reach a resolution on operations, the Regional Administrator of NMFS will make an operational decision for protection of listed species after conferring with CDFW. For operational issues regarding temperature management and carryover storage not resolved at Director level and elevated to NMFS, the Regional Administrator of NMFS will make the operational decision after conferring with the Executive Director of SWRCB. Reclamation will implement the operational decision.

an initial temperature management plan.

In May, Reclamation determines the actual May 1 cold water pool volume, presents the draft TMP to stakeholders the first week of May, and submits the final TMP to NMFS and SWRCB on or before May 20.

Reclamation convenes the Sacramento River Temperature Task Group at least monthly during the temperature management season and reports in real time on temperature performance.

(Final BA 4-15, 4-32 to 4-33; Shasta Cold Water Pool Management Guidance Document)

NMFS will provide technical assistance, review, and comment on the draft and final temperature management plans through the Sacramento River Temperature Task Group.

(2019 NMFS BiOp 256-257; Final BA 4-35.)

Reclamation will not shift to a warmer tier than is selected by May 15th of each year except in the case of an emergency or unforeseen conditions. In that event, Reclamation will notify NMFS within 2 business days and will coordinate with NMFS on the need to charter an independent panel to review temperature management plan implementation and performance. (2018 NMFS BiOp 233; Final BA 4-36.)

If forecasted Shasta storage is projected to be below 2.5 MAF at beginning of May, and dry conditions continue into April and May, Reclamation must confer with FWS and NMFS on potential intervention measures. (2019 NMFS BiOp 235; Final BA 4-33 to 4-34.)

Compliance with Delta Water Quality Objectives	PO ¶ 14: To the extent there is a drought proclamation in effect in Water Year 2022, Federal Defendants and State Plaintiffs anticipate the SWRCB will use its emergency authorities as appropriate to address dry conditions, including protecting Reclamation's previously stored water releases and implementing water curtailments in a timely manner. FWS, NMFS, CDFW, and Reclamation will use their authorities to support the operational priorities and species needs.	Dkt. 321-1 at 4: Reclamation shall comply with the water quality objectives that the CVP/SWP are required to meet pursuant to D-1641 and the biological opinions, including requirements relating to Delta inflows, Delta outflow and X2, and closures of the Delta Cross Channel Gates. Reclamation may seek leave of the Court to modify this injunction if, despite curtailment of water deliveries to contractors, it is unable to comply with the water quality objectives required under D-1641 and the 2019 BiOps.	Reclamation and DWR would operate to meet their responsibilities under D-1641, which include responsibility to meet water quality objectives (unless those responsibilities are altered as a result of a TUCP). SWRCB will exercise its quasi-adjudicatory authority pursuant to existing administrative procedures (including consideration of TUCP requests) for matters that may come before it.
Temperature Management Plan	PO ¶ 12, 16: NMFS may approve a draft temperature management plan as soon as April 1, 2022, provided that the plan includes carryover storage volumes and temperature targets, consistent with the decision process as set forth in paragraph 17 of the State/Federal IOP.		See "Shasta Planning Group and Decision Process for Shasta Operations," <i>supra</i> .

<p>1 Limitations on 2 CVP/SWP 3 water supply 4 allocations</p>		<p>Dkt. 321-1 at 4: As necessary to meet the injunction’s requirements for Shasta operations (in-stream temperature requirements, limitations on temperature dependent mortality, and storage) and to meet Delta water quality objectives, Reclamation and those acting in concert with Reclamation must curtail water deliveries to, water supply allocations for, and water diversions by all CVP and SWP contractors except for: (1) water deliveries necessary for human health and safety, as defined in §878.1 of title 23 of the Cal. Code of Regs.; (2) water deliveries to wildlife refuges (Level 2) as required by section 3406(d) of Public Law 102-575.</p> <p>As noted above, Reclamation may move for relief from the proposed injunction’s terms related to Shasta operations (in-stream temperature requirements, limitations on temperature dependent mortality, and storage) and Delta water quality objectives if, despite</p>	<p>Reclamation and DWR will “store, divert, and convey water in accordance with existing water contracts and agreements, including water service and repayment contracts, settlement contracts, exchange contracts, and refuge deliveries, consistent with water rights and applicable laws and regulations.” (Final BA, pp. 4-1.)</p> <p>Reclamation “lacks discretion” to modify “delivery of non-discretionary quantities of water to any contractor entitled to such non-discretionary deliveries.” (2019 NMFS BiOp 5-6)</p> <p><i>See also</i> Final BA, pp. 4-9 to 4-14 (summarizing Reclamation’s obligations under water contracts and settlement agreements).</p>
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		curtailments, it is unable to meet those terms.	
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DATED: January 24, 2022

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CERTIFICATE OF SERVICE

I hereby certify that today I electronically filed the foregoing with the Clerk of the Court via the CM/ECF system, which will send notification to the attorneys of record in this case.

/s/ Lesley Lawrence-Hammer